

A NEW SPECIES OF *CORALLIODRILUS*  
(OLIGOCHAETA: TUBIFICIDAE) FROM THE  
EASTERN GULF OF MEXICO, AND A NEW  
RECORD OF *C. CORPULENTUS* FROM  
SOUTH CAROLINA

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*Abstract.* — *Coralliodrilus priscus*, is described from off Tampa Bay, Florida. It is closely related to *C. corpulentus* Erséus, 1986, which is recorded here from off Charleston, South Carolina, but it differs from that species by its lack of modified posterior dorsal setae and its greater number of penial setae (about 20–25 as opposed to about 10–12 per bundle).

*Coralliodrilus* Erséus, 1979 (subfamily Phallo-drilinae) is a marine genus of largely tropical and subtropical Tubificidae, and it currently contains fifteen species (Erséus 1990, 1992). One of these is *C. corpulentus* Erséus, 1986, previously known only from Hutchinson Island, east coast of Florida (Erséus 1986). Specimens of *C. corpulentus*, and material of a new, closely related species, were found by the second author while identifying benthic macroinvertebrates from two different dredge spoil disposal sites, in South Carolina and eastern Florida, respectively. Both taxa are reported in the present paper.

The worms were stained in paracarmine and mounted whole in Canada balsam prior to examination. The material is deposited in the United States National Museum of Natural History (USNM), Washington, D.C.

*Coralliodrilus corpulentus* Erséus, 1986

Fig. 1A

*Coralliodrilus corpulentus* Erséus, 1986:305–307, fig. 12.

*New material.* — USNM 148665–148666, 2 specimens from off Charleston, South Carolina, 32°38'32"N, 79°43'00"W, 15 m, medium sand with 39% carbonates (20 July 1989; Mote Marine Lab study of a disposal

site of dredge spoils, for South Carolina Wildlife and Fisheries).

*Remarks.* — *Coralliodrilus corpulentus* was previously known only from off Hutchinson Island, east coast of Florida (Erséus 1986). The two new specimens from South Carolina are 4.8 and 6.0 mm long, with 54 and 55 segments respectively, and conform well with the original description. The penial setae, about 10–12 per bundle, are 70–75  $\mu\text{m}$  long. The atria are 140–150  $\mu\text{m}$  long, 55–70  $\mu\text{m}$  wide, i.e., they are somewhat smaller than those of the type specimens (210–290  $\mu\text{m}$  long, 55–80  $\mu\text{m}$  wide). The outer muscular layer of the atria, however, is up to 16  $\mu\text{m}$  thick in the new worms (maximally 12  $\mu\text{m}$  in original material).

Many posterior dorsal setae are modified in this species; the upper tooth is much reduced, or lacking completely, while the lower tooth is prolonged and sharply pointed. One bundle of such setae from the new material is shown in Fig. 1A. *Corpulentus priscus*, n. sp., which undoubtedly is very closely related to *C. corpulentus*, does not have these modified setae (see below).

*Distribution and habitat.* — South Carolina (new record) and east coast of Florida. Subtidal carbonate sediments, 10–15 m depth.

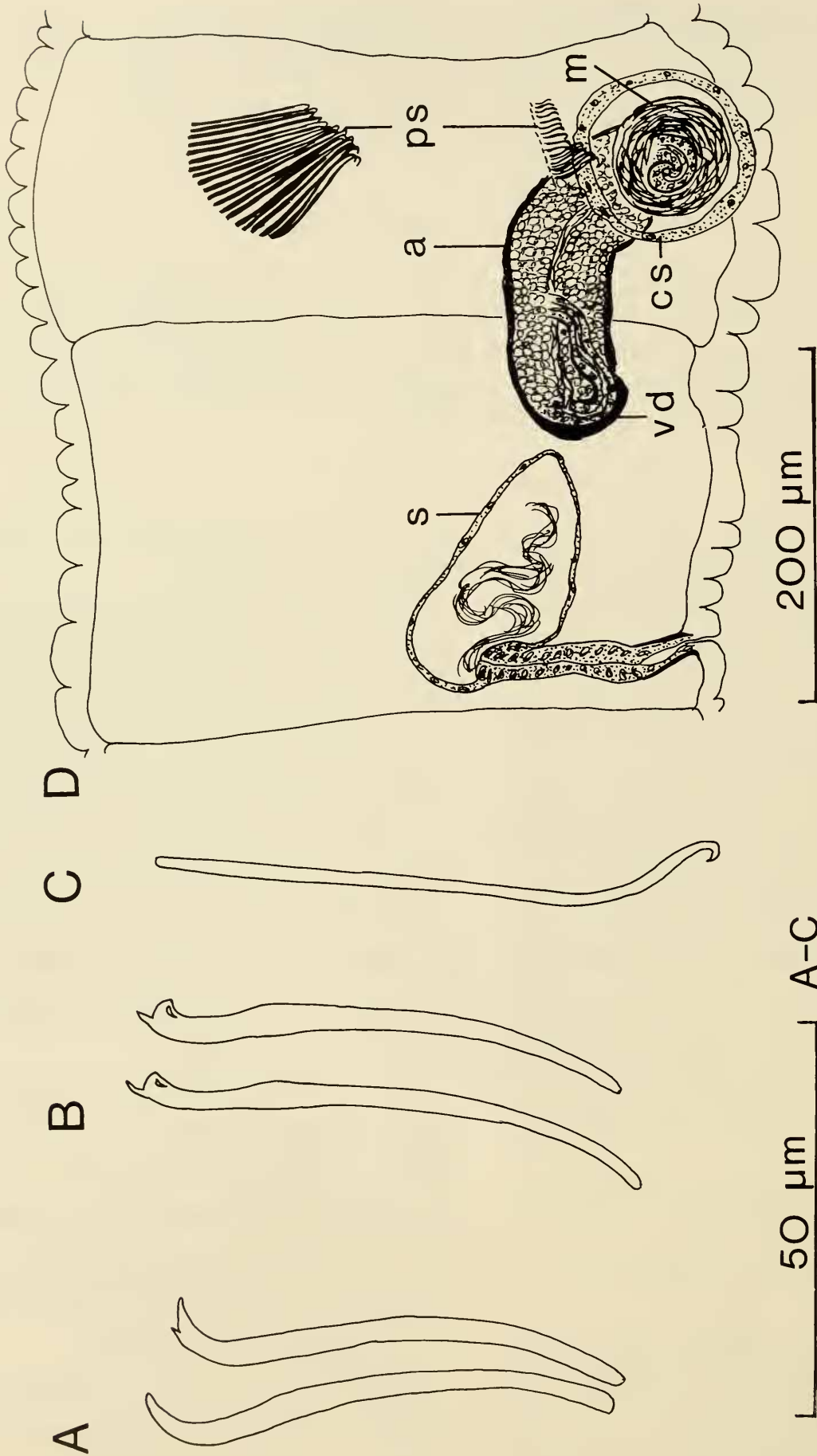


Fig. 1. A, *Coralliodrilus corpulentus*. Posterior dorsal somatic setae. B-D, *Coralliodrilus priscus*. B, Somatic setae; C, Penial setae; D, Lateral view of genitalia in segments X-XI. [Penial setae shown in full for one side of worm (upper right in Fig. 1D). For other side (the one with spermatheca and male depicted), only tips of penial setae indicated; these setae curved, much distorted, in specimen in question.] Abbreviations: a, atrium; m, muscular bulb; ps, penial setae; ss, spermatheca; vd, vas deferens.

*Coralliodrilus priscus*, new species

Fig. 1B–D

*Holotype*. — USNM 148668, whole-mounted specimen.

*Type locality*. — Gulf of Mexico off Tampa Bay, west coast of Florida, 27°32'48"N, 83°04'56"W, 24 m, medium sand with 15% silt and 3% organics (12 August 1987; Mote Marine Lab study of benthic communities in the vicinity of the Tampa Bay Material Ocean disposal site, for the United States Environment Protection Agency).

*Paratype*. — USNM 148667, 1 specimen from type locality; mounted on same slide as holotype.

*Etymology*. — Named *priscus* (Latin for 'old-fashioned'), as it lacks the advanced, modified dorsal setae in posterior segments, which characterize its closely related congener, *C. corpulentus*.

*Description*. — Length 6.2 and 7.0 mm, 55 and 52 segments, respectively. Width at XI, 0.42–0.44 mm. Prostomium rounded; short in holotype, elongate in paratype. Fixed specimens stout; segments short. Secondary annulation present, several annuli per segment. Clitellum poorly developed in both specimens. All somatic setae bifid (Fig. 1B), with upper tooth thinner and shorter than lower, and with subdental ligament. Bifids 40–70  $\mu\text{m}$  long, 2–3.5  $\mu\text{m}$  thick, (2)3(4) per bundle anteriorly, (1)2(3) per bundle in postclitellar segments. Penial setae (Fig. 1C, D; *ps*) slender and ectally hooked, 80–85  $\mu\text{m}$  long, about 2  $\mu\text{m}$  thick, at least about 20–25 per bundle (exact number difficult to establish). Male pores paired in line with ventral somatic setae, posteriorly in XI. Spermathecal pores paired in lateral lines, anteriorly in X.

Pharyngeal glands poorly developed, but appear to be present in at least V–VI. Male genitalia (Fig. 1D) paired. Vas deferens 12–14  $\mu\text{m}$  wide, entering apical end of atrium; appears much shorter than atrium, but not observed in its full length. Atrium somewhat spindle-shaped, extending forward into X; main part of atrium (ampulla) 190–220

$\mu\text{m}$  long, 60–70  $\mu\text{m}$  wide, with ciliated and granulated inner epithelium, and muscular outer lining of varying thickness (2–12  $\mu\text{m}$ ). Ectally, atrium tapering into short (50–70  $\mu\text{m}$ ), narrow (18–20  $\mu\text{m}$ ) duct surrounded by very strong muscles. These muscles forming a compact, round bulb, about 60  $\mu\text{m}$  wide, at middle of which atrial duct opens to exterior. Whole bulb appears enclosed in a round (shallow?) copulatory sac. Spermathecae (Fig. 1D, *s*) consisting of ducts, 70–100  $\mu\text{m}$  long, 16–23  $\mu\text{m}$  wide, and thin-walled, somewhat pear-shaped ampullae, 85–130  $\mu\text{m}$  long, about 60  $\mu\text{m}$  wide. Most ectal part of spermathecal ducts somewhat muscular. Spermathecal ampullae with coiled bundles of sperm.

*Remarks*. — This new species is very similar to *C. corpulentus*, also recorded in the present study, but it is easily distinguished from that taxon by its lack of modified somatic setae (cf. Fig. 1A), and its greater number of penial setae (about 20–25 as opposed to about 10–12 per bundle; see Erséus 1986). In addition, *C. priscus* appears to have somewhat less muscular atria than *C. corpulentus*. However, due to the great variation of this character in both species, even along the same atrium, it is diagnostically less useful.

Copulatory sacs, which are described for *C. priscus* here (Fig. 1D, *cs*), have not been observed in *C. corpulentus* (see Erséus 1986: fig. 12D).

*Distribution and habitat*. — Known only from the type locality, west coast of Florida. Subtidal medium sand, 24 m depth.

## Acknowledgments

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